Indiana's Trends in Toxic Releases and Environmental Waste

Toxic Release Inventory Reporting Year 2001

Indiana Department of Environmental Management
Office of Pollution Prevention & Technical Assistance
2003

Compiled by:
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The information contained in this document is being provided by the Office of Pollution Prevention and Technical Assistance (OPPTA). Every effort has been made to ensure accuracy in the TRI data. However, the following report is a "snapshot" of toxic releases reported from companies at a specific point in time and therefore does not reflect any changes that have occurred since the information was compiled.

While TRI provides federal, state and local governments, the public, and industry with key environmental data, it has some limitations that must be considered:

- TRI data reflect releases and other waste management of chemicals, not exposures of the public to those chemicals.
- Although EPA has expanded the TRI program, it does not cover all sources of releases and other waste management activities such as car emissions, nor does it cover all toxic chemicals or industry sectors.

Beyond reporting release and waste management activities, only limited and very general information on chemical storage is provided. In addition, while many facilities base their TRI data on monitoring data, others report estimated data to TRI as the program does not mandate release monitoring.

Toxic Release Inventory Question and Answer Document
Reporting Year 2001

TRI REPORTING CRITERIA

Who must report?

Facilities meeting the following criteria must submit a TRI Form R:

- Covered in Standard Industrial Classification (SIC) Codes 2000-3999 (reporting since 1990); plus seven additional source categories added in reporting year 1998 (referred to throughout this report as "new" sectors): metal mining, coal mining; SIC codes 4911, 4931, and 4939 that combust coal and oil for electric generation; SIC 4953 commercial hazardous waste treatment facilities; SIC 5169 chemical and allied products wholesale; SIC 5171 petroleum bulk terminals and plants; SIC 7389 solvent recovery services; and federal facilities.

and

- Have the equivalent of 10 or more full time staff (2,000 hours per year is 1 full time employee, a total of 20,000 hours or more per year meets this requirement.)

and

- Exceed the threshold for **Manufacturing** or **Processing** a listed toxic chemical (25,000 pounds for non-PBT chemicals*)

or

- Exceed the threshold for **Otherwise Use** of a listed toxic chemical (10,000 pounds for non-PBT chemicals*).

***PBT (persistent, bioaccumulative, toxic chemicals) have much lower thresholds ranging from 0.1 grams to 100 pounds.**

When are reports due?

Reports are due July 1, of each year for the previous calendar year information. This document covers reports due July 1, 2002 for activities that took place during 2001.

What is meant by original sectors versus new sectors?

TRI program is commonly divided into two groups called "original sector" and "new sector". Original sector industries are those covered under the original legislation. New sector industries are those which were added with new rulemaking in subsequent years.

What changes occurred to TRI reporting requirements this year?

As a PBT, lead and lead compounds are subject to a new, lower reporting threshold beginning in reporting year (RY) 2001. Lead is considered to be of particular concern because of its known health effects on children. Previously, facilities were not required to report releases or waste management activities for lead unless they manufactured or processed more than 25,000 pounds or otherwise used 10,000 pounds annually. The new requirements lower the annual reporting threshold for lead and lead compounds to 100 pounds. For lead found in stainless steel, brass, or bronze alloys, the threshold remains at 25,000 pounds each for manufacturing and processing and 10,000 pounds for otherwise use. All data is reported in pounds unless otherwise noted.

What factors should be considered when reviewing TRI data?

TRI provides release and waste management data for facilities that meet the activity thresholds for certain toxic chemicals. While this information is valuable, it does not provide a complete picture. TRI was intended as a starting point for the evaluation of exposure to toxic chemicals. However, it does not cover all industries, all chemicals, or all releases. Also, the toxicity of the chemical and actual exposure must be considered when evaluating TRI data. For additional information on TRI factors, see EPA's website at www.epa.gov/tri/2002_tri_brochure.pdf.

Why is there a difference between EPA's report for Indiana releases and IDEM's report?

Facilities are required to send Form R reports both to EPA and IDEM by July 1st of each year. After that date, facilities may send revisions to their data. EPA generally locks down their database mid-winter. If revisions are submitted after that date, the changes may not be reflected in EPA reports. This year IDEM did not lock down their database until May. Therefore, the IDEM data will reflect changes that EPA may not.

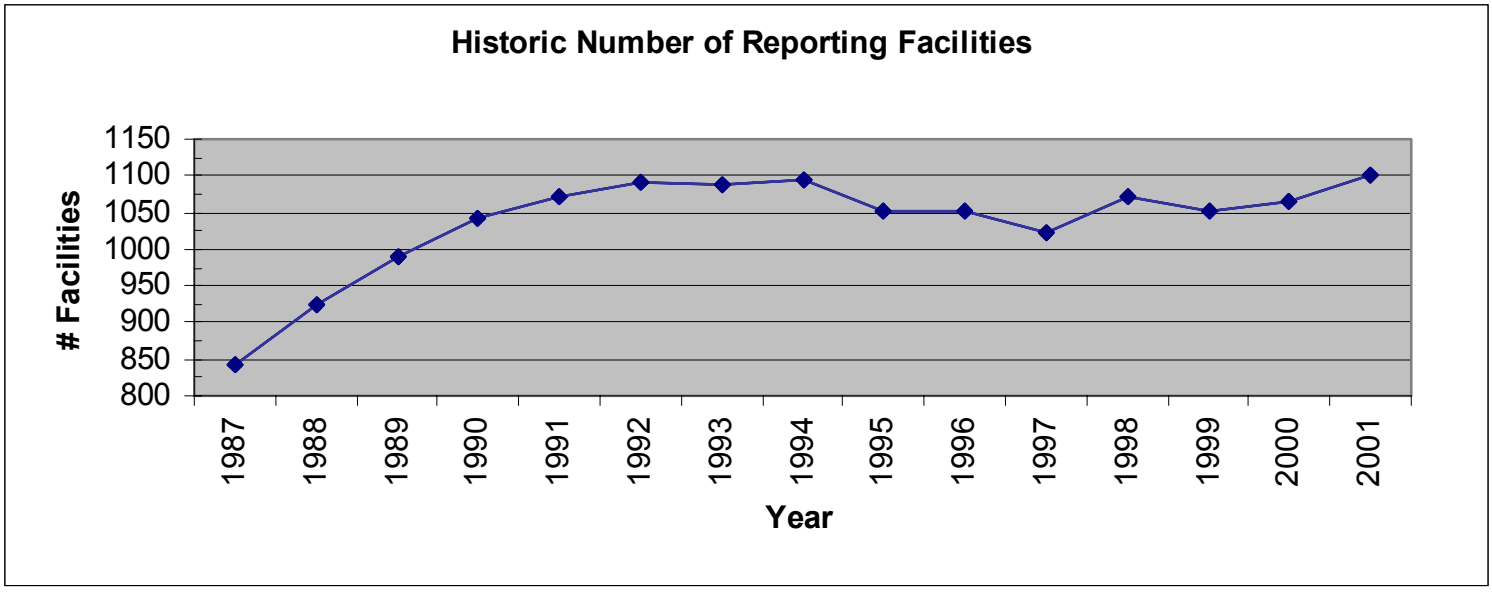
Where can I find more information on the health effects of these toxic chemicals?

For additional information on the toxic chemicals reported to the TRI, please refer to the Agency for Toxic Substances and Disease Registry. Fact sheets are available on their website at www.atsdr.cdc.gov/toxfaq.html. IDEM also has TOXWatch, a website with chemical and health information, available on the web at www.IN.gov/idem/air/toxwatch/health/.

TRI REPORTING INFORMATION

How many chemical reports were submitted in Indiana for the RY2001?

- 1101 individual facilities filed 4139 reports. This is the largest number of facilities ever to report and is up 35 facilities and 161 reports from last year.
- 197 different chemicals were reported.



How many previous year (2000) reporters did not report in 2001 and who is a new reporter in 2001?

IDEM's Quality Assurance (QA) letter process determined the following numbers and reasons for facilities reporting in 2000 not reporting in 2001.

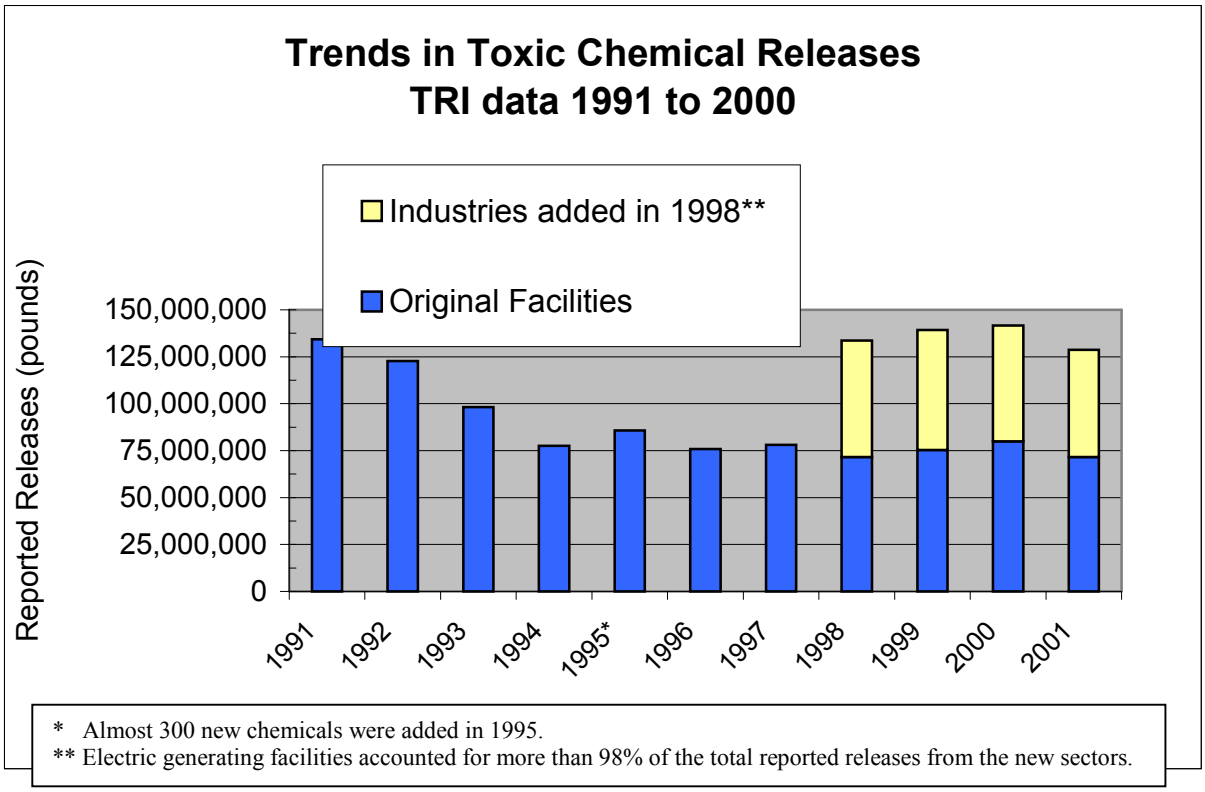
Total non-reporters: 74

- 19 facilities no longer met manufacturing, processing or otherwise use thresholds.
- 4 facilities no longer had reportable chemicals.
- 17 facilities closed.
- 34 facilities did not respond.

Total new reporters: 86

- 42 facilities began reporting due to the new lead rule. (see TRI Reporting Criteria)
- 44 facilities began reporting because a threshold was exceeded.

OVERVIEW and TRENDS in TOXIC CHEMICAL RELEASES



How do RY2001 statewide total releases compare to total releases in RY2000?

The statewide total decreased from 141.6 million pounds to 128.7 million. This 12.9 million pound decrease was possibly due to a contraction in Indiana's economy. The 9.1% decrease in releases closely correlates with the U.S. Department of Commerce Bureau of Economics which lists the manufacturing portion of the Indiana Gross State Product as down 9.2% in 2001 as compared to 2000.

How do the original RY1987 sectors' total releases compare with releases from RY2000 to RY2001?

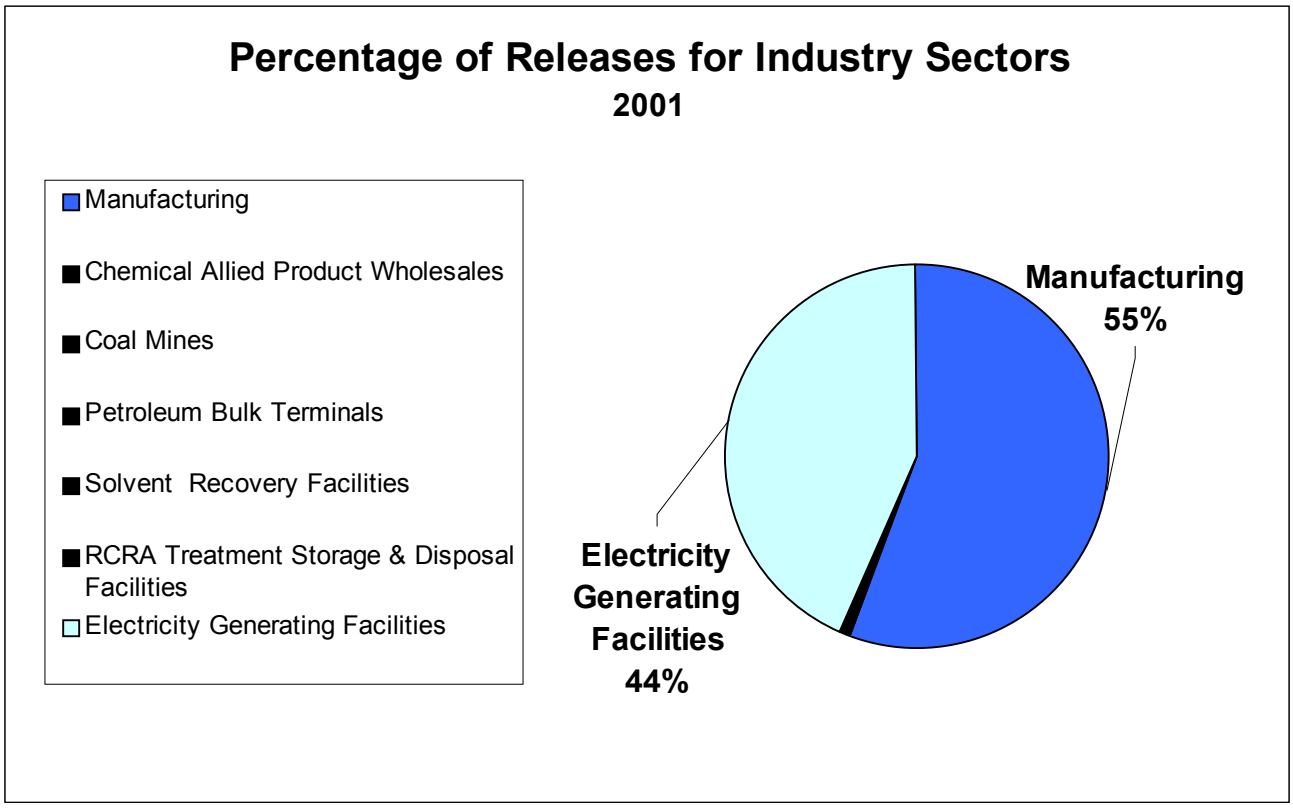
The original sectors reporting decreased from 80.0 million pounds in RY2000 to 71.6 million pounds in RY2001. The original sectors, or the blue section on the bar graph, decreased their releases by about 8.4 million pounds or nearly 10.5%. More than half of these reductions (4.8 million pounds) occurred due to reductions at 10 manufacturing facilities. Beta Steel Corporation in Porter county had the largest reductions. Three steel mills (USS Gary Works, AK Steel Corporation, and Bethlehem Steel) had significant increases in releases, totaling over 6.3 million pounds in increases. USS Gary Works accounted for 3.4 million pounds in increases alone.

How do the new RY1998 sectors' total releases compare with releases from RY2000 to RY2001?

The new sectors reporting decreased from 61.6 million pounds in RY2000 to 57.1 million pounds in RY2001. The new sectors, or the yellow section on the bar graph, decreased their releases by about 4.5 million pounds or 7.3%. Electric generating facilities accounted for more than 56 million pounds or 98% of the total reported releases from the new sectors. Five electric generating facilities had a combined reduction in releases of 5.0 million pounds, while additional four electric generating facilities had a combined increase in releases of almost 3.0 million pounds.

What types of industries are reporting in Indiana?

Description	RY2001 Releases (pounds)	# Facilities	% of Releases
Manufacturing	71,628,087	1022	55%
Chemical Allied Product Wholesales	25,390	19	<1%
Coal Mines	825,106	15	<1%
Petroleum Bulk Terminals	54,984	13	<1%
Solvent Recovery Facilities	8,671	5	<1%
RCRA Treatment Storage & Disposal Facilities	2,358	3	<1%
Electricity Generating Facilities	56,195,725	24	44%
TOTAL	**128,740,322**	**1101**	**100%**



How does Indiana compare nationally?

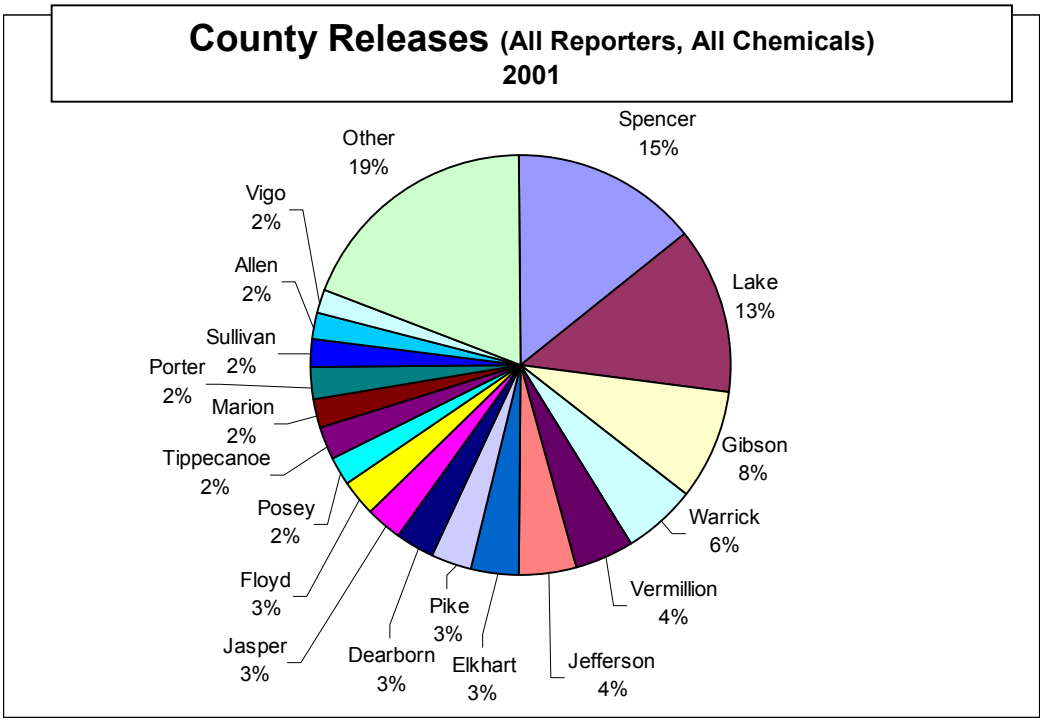
Indiana TRI National Rankings Comparison 1998 to 2001				
Category	**1998**	**1999**	**2000**	**2001**
Total On- and Off-site Releases	9	9	8	8
Total On-site Releases	12	12	11	10
Total Releases	10	9	8	8
Total Production-related Waste	10	11	9	7

COUNTY RELEASE INFORMATION

What are the Top Ten counties for releases in RY2001 and what are the changes in releases from RY2000?

The top six counties accounted for 50% of the total releases in the state. The top ten counties accounted for more than 60% of the total releases in the state. And the top 18 counties accounted for almost 80% of the total releases in Indiana in 2001.

County	Reported Releases 2001 (million pounds)	Rank 2001	Reported Releases 2000 (million pounds)	Rank 2000	% Change
Spencer	18.8	1	16.6	2	13.4
Lake	16.2	2	16.9	1	-4.2
Gibson	10.7	3	11.1	3	-2.8
Warrick	7.3	4	8.1	4	-10.1
Vermillion	5.8	5	6.1	7	-4.6
Jefferson	5.8	6	5.6	9	2.3
Elkhart	4.4	7	6.1	6	-28.2
Pike	4.1	8	5.7	8	-28.9
Dearborn	4.0	9	6.2	5	-37.0
Jasper	3.7	10	4.2	10	-10.6



How many facilities are in the Top Ten counties and what is the change from RY2000?

County	Number of Facilities in 2001	Number of Facilities in 2000	Change in # of Facilities
Spencer	4	5	-1
Lake	53	59	-6
Gibson	9	8	1
Warrick	6	6	0
Vermillion	3	3	0
Jefferson	10	11	-1
Elkhart	112	109	3
Pike	5	4	1
Dearborn	6	6	0
Jasper	6	5	1

FACILITY INFORMATION

What are the Top Ten facilities for on-site releases in RY2001 (All Chemicals, All Sectors)?

2001 Rank	Facility	County	2001 Releases (million pounds)	2000 Rank	2000 Releases (million pounds)	% Change
1	AK Steel Corp.	Spencer	14.2	2	12.2	16.0
2	USS Gary Works	Lake	14.0	1	14.5	-4.2
3	Gibson Generating Station	Gibson	10.4	3	10.9	-3.9
4	Clifty Creek Station	Jefferson	5.7	5	5.5	3.8
5	ALCOA Power Generating, Inc.	Warrick	5.0	6	4.9	1.3
6	Cayuga Generating Station	Vermillion	4.8	7	4.8	-0.1
7	American Electric Power-Rockport Plant	Spencer	4.5	8	4.2	6.5
8	NIPSCO R.M. Schaefer Generating Station	Jasper	3.7	9	4.2	-10.7
9	American Electric Power -Tanners Creek Plant	Dearborn	3.6	4	6.0	-38.7
10	Gallagher Generating Station	Floyd	3.1	10	3.5	-10.8

What are the Top Ten facilities for RY2001 for (All Chemicals, Original Sectors)?

2001 Rank	Facility	County	2001 Releases (million pounds)	2000 Rank	2000 Releases (million pounds)	% Change
1	AK Steel Corp.	Spencer	14.2	2	12.2	16.0
2	USS Gary Works	Lake	14.0	1	14.5	-4.2
3	GE Plastics - MT. Vernon, Inc.	Posey	1.8	4	2.0	-4.5
4	GMTG Fort Wayne Assembly	Allen	1.6	5	1.4	15.6
5	ALCOA Inc. - Warrick Operations	Warrick	1.6	3	2.0	-21.8
6	Bethlehem Steel Corp. -Burns Harbor Div.	Porter	1.5	6	1.4	7.6
7	Allegheny Ludlum Corp.	Henry	1.5	14	0.9	69.4
8	Cargill, Inc.	Tippecanoe	1.1	12	0.9	17.4
9	Clinton Laboratories	Vermillion	1.0	7	1.3	-21.2
10	BP Products North America -Whiting Business Unit	Lake	1.0	24	0.5	81.4

What are the Top Ten facilities for RY2001 releases (All Chemicals, New Sectors)?

2001 Rank	Facility	County	2001 Releases (million pounds)	2000 Rank	2000 Releases (million pounds)	% Change
1	Gibson Generating Station	Gibson	10.4	1	10.9	-3.9
2	Clifty Creek Station	Jefferson	5.7	3	5.5	3.8
3	ALCOA Power Generating, Inc.	Warrick	4.9	4	4.9	1.3
4	Cayuga Generating Station	Vermillion	4.8	5	4.8	-0.0
5	American Electric Power -Rockport Plant	Spencer	4.5	6	4.2	6.5
6	NIPSCO R.M. Schahfer Generating Station	Jasper	3.7	7	4.2	-10.7
7	American Electric Power - Tanners Creek Plant	Dearborn	3.6	2	5.9	-38.7
8	Gallagher Generating Station	Floyd	3.1	8	3.5	-10.8
9	Merom Generating Station	Sullivan	2.9	10	2.9	0.1
10	Frank E. Ratts Generating Station	Pike	2.1	11	2.3	-6.9

What facilities reported the greatest REDUCTION in releases for RY2001 (All Chemicals, All Facilities)?

2001 Rank	Facility	County	2001 Releases (million pounds)	2000 Releases (million pounds)	% Change
1	American Electric Power - Tanners Creek Plant	Dearborn	3.6	5.9	-38.7%
2	IPL/AES Petersburg	Pike	2.0	3.4	-43.3%
3	Beta Steel Corp.	Porter		0.9	-99.4%
4	Indiana Steel & Wire Acquisitions Co., LTD.	Delaware	0.2	1.0	-75.1%
5	Ken-Koat, Inc.	Huntington	0.1	0.6	-79.7%
6	Carpenter Co., Elkhart Div.	Elkhart	0.6	1.1	-42.4%
7	R.M. Schahfer Generating Station	Jasper	3.7	4.2	-10.7%
8	Sonoco Flexible Packaging	Johnson	0.6	1.0	-44.0%
9	GE Appliances, Bloomington, Inc.	Monroe	0.2	0.6	-64.7%
10	Flexible Foam Products, Inc.	Elkhart	0.3	0.7	-57.3%

CHEMICAL INFORMATION

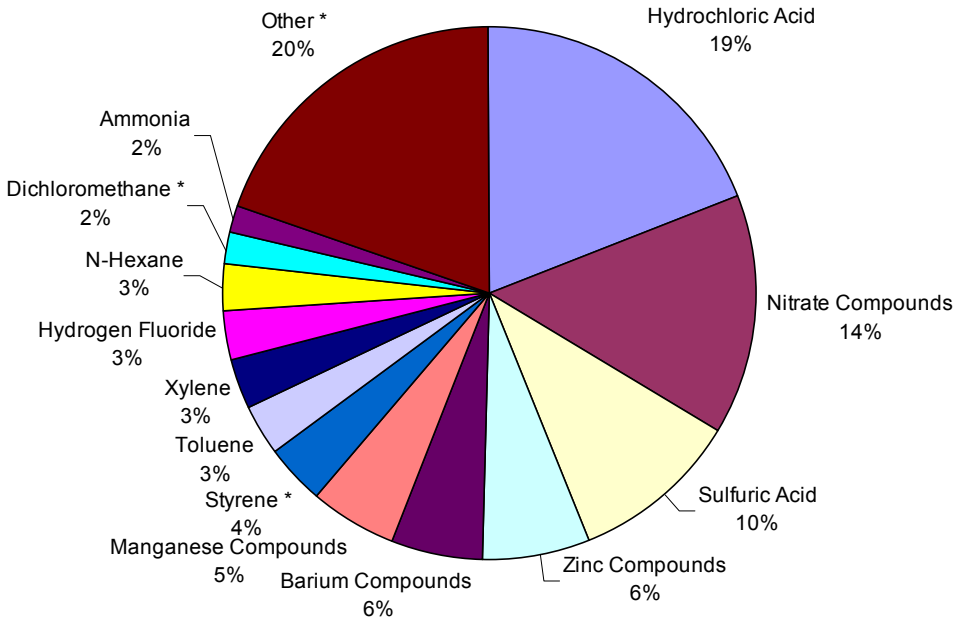
What are the Top Ten chemicals released in Indiana for RY2001 (All Reporters, All chemicals)?

The top four chemicals released accounted for 49% of the total releases in the state. The top ten chemicals accounted for 73% of the total releases in the state. And the top 13 chemicals accounted for 80% of the total releases in Indiana in 2001.

Chemical Name	Rank 2001	2001 Reported Releases (million pounds)	Rank 2000	2000 Reported Releases (million pounds)	% Change
Hydrochloric Acid	1	24.8	1	27.6	-10.1
Nitrate Compounds	2	18.5	2	17.2	7.9
Sulfuric Acid	3	13.0	3	12.4	4.7
Zinc Compounds	4	8.2	4	9.5	-14.0
Barium Compounds	5	7.3	5	7.4	-1.5
Manganese Compounds	6	6.6	6	6.5	-1.4
Styrene*	7	4.8	8	5.7	-16.2
Toluene	8	4.1	7	6.2	-33.3
Xylene (Mixed Isomers)	9	3.9	9	5.1	-23.1
Hydrogen Fluoride	10	3.9	11	4.0	-1.8

*Meets OSHA definition as a carcinogen.

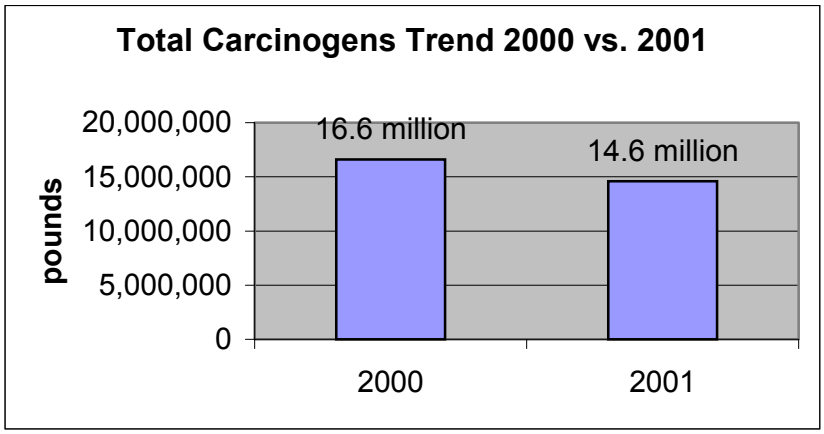
Chemical Breakdown



*Meets OSHA definition as a carcinogen. Other category contains carcinogenic and non-carcinogenic chemicals.

KNOWN and POTENTIAL CARCINOGENIC CHEMICAL INFORMATION

The TRI relies on the Occupational Safety and Health Administration's (OSHA) definition of carcinogen to identify chemicals, which warrant added attention due to their potential to cause cancer in humans. The OSHA definition includes chemicals determined to be known, probable, or possible carcinogens. For ease of discussion, probable and possible carcinogens are referred to here as *potential* carcinogens.



Known and potential carcinogenic releases continued their decreasing trend; down by slightly more than 12% (2 million pounds) from 16.6 million pounds in 2000 to 14.6 million pounds in 2001.

What are the Top Ten known and potential carcinogenic* chemicals released in RY2001 (All Reporters)?

* as defined by OSHA

In 2001, known and potential carcinogenic chemicals accounted for more than 11% of the total releases in Indiana, of which two carcinogens, styrene and dichloromethane, accounted for 6% of total state releases or more than 51% of total known or potential carcinogenic releases. Although total releases includes releases to the air, land, water, and through underground injection, 68% of carcinogenic releases in Indiana are to the air with an additional 31% being released to water.

2001 Rank	Chemical Name	2001 Releases (million pounds)	2000 Rank	2000 Releases (million pounds)	% Change
1	Styrene	4.8	1	5.7	-16.2
2	Dichloromethane	2.7	2	4.0	-30.8
3	Nickel Compounds	1.5	3	1.6	-6.8
4	Chromium Compounds	1.4	4	1.4	5.0
5	Trichloroethylene	1.2	5	1.2	-5.6
6	Lead Compounds	1.0	6	0.9	6.2
7	Ethylbenzene	0.5	8	0.6	-15.9
8	Arsenic Compounds	0.4	7	0.4	-7.7
9	Cobalt Compounds	0.3	9	0.4	-22.4
10	Benzene	0.2	10	0.2	-17.2

What are the Top Ten known or potential carcinogenic* chemicals released in RY2001 (Original Sectors)?

*as defined by OSHA

2001 Rank	Chemical Name	2001 Releases (million pounds)	2000 Rank	2000 Releases (million pounds)	% Change
1	Styrene	4.8	1	5.7	-16.2
2	Dichloromethane	2.7	2	4.0	-30.9
3	Trichloroethylene	1.2	3	1.2	-5.5
4	Ethylbenzene	0.5	4	0.6	-7.3
5	Chromium Compounds	0.4	5	0.3	46.8
6	Lead Compounds	0.3	7	0.2	46.6
7	Benzene	0.2	6	0.2	-16.9
8	Formaldehyde	0.1	9	0.1	17.0
9	Nickel Compounds	0.1	13	0.1	84.0
10	Vinyl Acetate	0.1	10	0.1	8.1

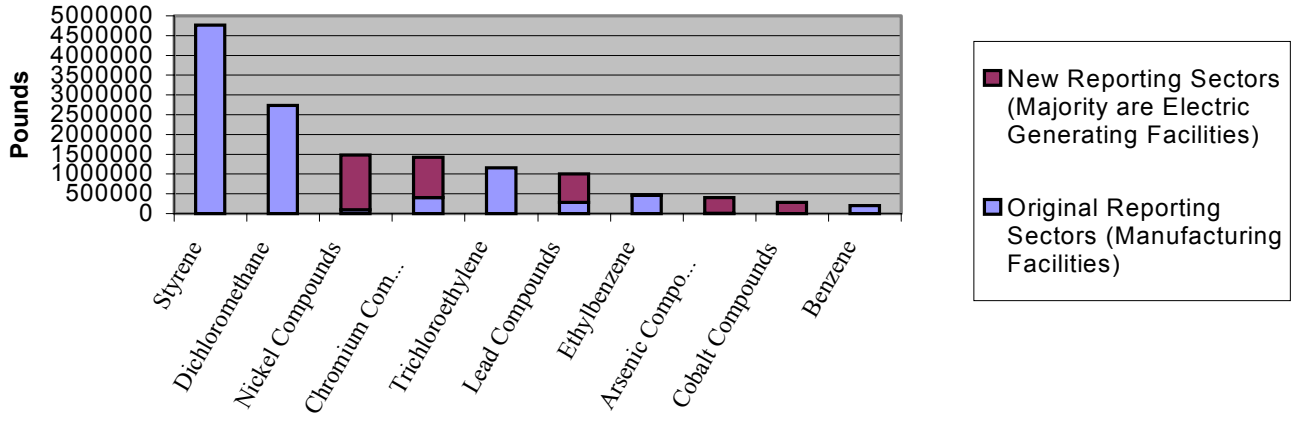
What are the Top Five known or potential carcinogenic* chemicals released in RY2001 (New Sectors)?

*as defined by OSHA

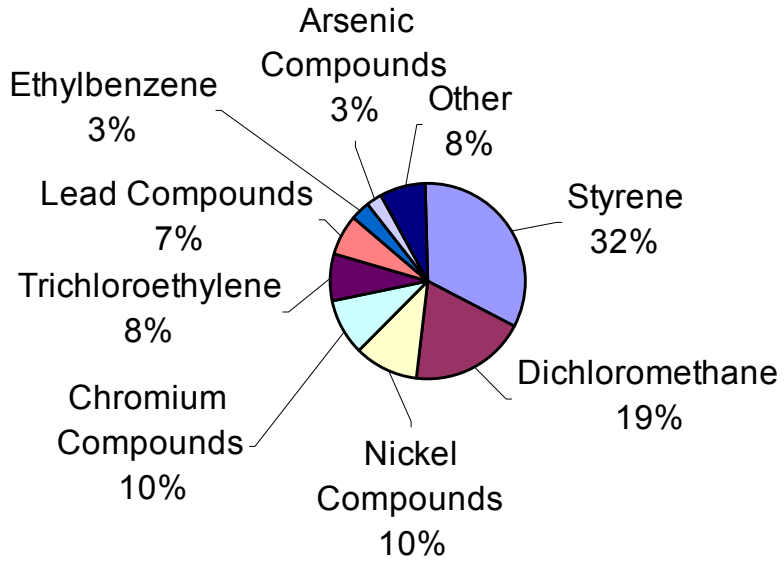
2001 Rank	Chemical Name	2001 Releases (million pounds)	2000 Rank	2000 Releases (million pounds)	% Change
1	Nickel Compounds	1.4	1	1.5	-9.9
2	Chromium Compounds	1.0	2	1.1	-5.5
3	Lead Compounds	0.7	3	0.7	-4.3
4	Arsenic Compounds	0.4	4	0.4	-8.4
5	Cobalt Compounds	0.3	5	0.4	-21.7

Which Industry Groups are Releasing Known or Potential Carcinogens?

2001

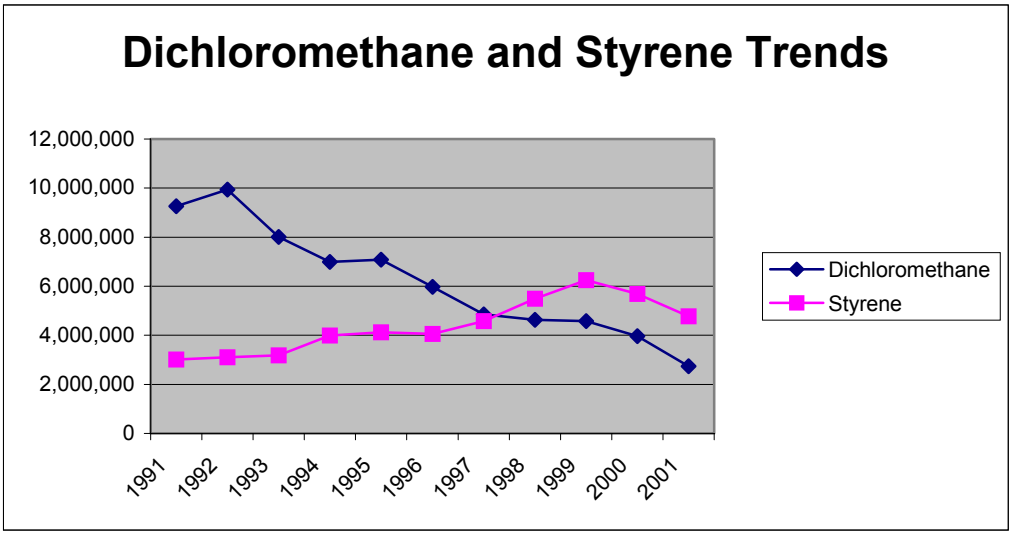


Percentage Breakdown of Known or Potential Carcinogens



Have IDEM initiatives for certain chemicals had an effect on the releases?

Several years ago, IDEM identified several chemicals where efforts needed to be taken to reduce emissions. Styrene and dichloromethane (methylene chloride) were identified for IDEM initiatives due to their possible carcinogenic status. In 1998, many fiberglass manufacturers began using a new emission factor to calculate styrene emissions. This new factor was double the old factor. A state rule was developed that included an option to use pollution prevention technologies to significantly reduce styrene emissions from open molding reinforced plastic parts manufacturers. This rule went into effect March 2001 and has helped reduced styrene emissions from 5.7 million pounds in 2000 to 4.8 million pounds in 2001. IDEM began outreach to the flexible polyurethane foam manufacturers in 1997 in an effort to reduce their use of dichloromethane. In 2001, a federal rule for this industry began and further reduced emissions from a high of almost 10 million pounds in 1992 to less than 2.7 million pounds in 2001. Below are graphs showing the reduction trends of these two chemicals since these initiatives began. The initiatives included rule making, pollution prevention and compliance assistance outreach, and increased inspection efforts.

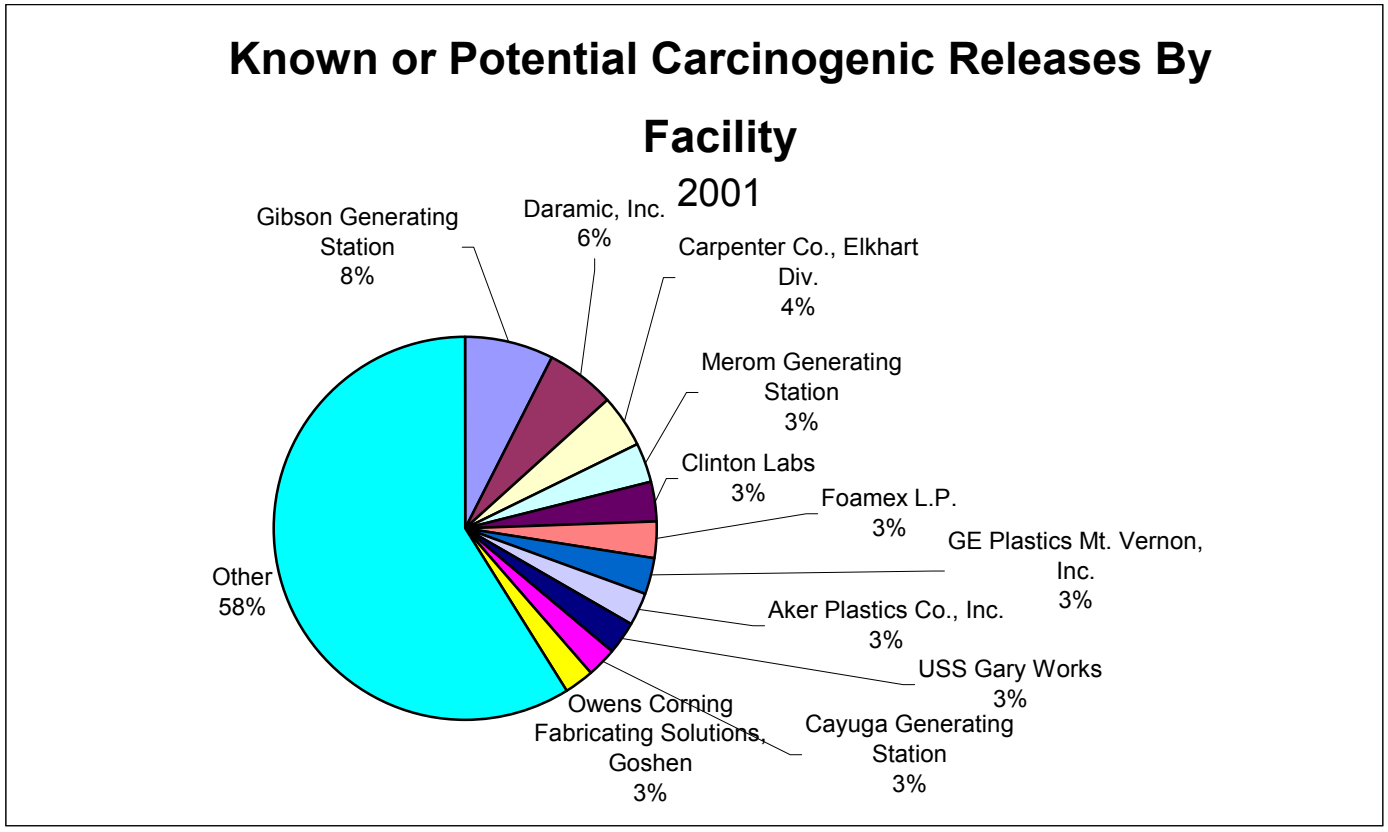


What are the Top Ten facilities reporting known or potential carcinogenic* releases in RY2001 (All Reporters)?

* as defined by OSHA

39% of all known or potential carcinogenic releases occur from these top ten facilities.

2001 Rank	Facility	County	2001 Releases (million pounds)	2000 Rank	2000 Releases (million pounds)	% Change
1	Gibson Generating Station	Gibson	1.1	1	1.2	-4.6
2	Daramic, Inc.	Harrison	0.8	5	0.6	44.2
3	Carpenter Co. – Elkhart Division	Elkhart	0.6	2	1.1	-42.4
4	Merom Generating Station	Sullivan	0.5	8	0.5	-3.4
5	Clinton Laboratories	Vermillion	0.5	12	0.3	42.3
6	Foamex L.P.	Elkhart	0.5	4	0.7	-33.6
7	GE Plastics MT. Vernon, Inc.	Posey	0.4	14	0.3	43.8
8	Aker Plastics Co., Inc.	Marshall	0.4	7	0.5	-13.9
9	USS Gary Works	Lake	0.4	9	0.4	0.0
10	Cayuga Generating Station	Vermillion	0.4	10	0.4	0.0



What are the Top Ten facilities reporting known or potential carcinogenic* releases in RY2001 (Original Sectors)?

*as defined by OSHA

2001 Rank	Facility	County	2001 Releases (million pounds)	2000 Rank	2000 Releases (million pounds)	% Change
1	Daramic, Inc.	Harrison	0.8	4	0.6	44.2
2	Carpenter Co. - Elkhart Div.	Elkhart	0.6	1	1.1	-42.4
3	Clinton Laboratories	Vermillion	0.5	7	0.4	34.2
4	Foamex L.P.	Elkhart	0.5	3	0.7	-33.6
5	GE Plastics - MT. Vernon, Inc.	Posey	0.4	10	0.3	40.8
6	Aker Plastics Co., Inc.	Marshall	0.4	5	0.5	-13.9
7	USS Gary Works	Lake	0.4	6	0.4	-0.0
8	Owens Corning Fabricating Solutions - Goshen Facility*	Elkhart	0.4	9	0.3	-9.0
9	Flexible Foam Products	Elkhart	0.3	2	0.7	-57.3
10	Rinker Boat Company, Inc.	Kosciusko	0.2	8	0.3	-28.3

* formally Fabwel Composites

What are the Top Ten facilities reporting known or potential carcinogenic* releases in RY2001 (New Sectors)?

*as defined by OSHA

These are also the top ten electric generating facilities emitting carcinogens.

2001 Rank	Facility	County	2001 Releases (million pounds)	2000 Rank	2000 Releases (million pounds)	% Change
1	Gibson Generating Station	Gibson	1.1	1	1. 2	-4.6
2	Merom Generating Station	Sullivan	0.5	2	0.5	-3.4
3	Cayuga Generating Station	Vermillion	0.4	4	0.4	0.9
4	ALCOA Power Generating, Inc.	Warrick	0.3	5	0.3	-14.6
5	NIPSCO R.M. Schahfer Generating Station	Jasper	0.2	6	0.3	-26.3
6	American Electric Power - Rockport Plant	Spencer	0.2	8	0.1	37.9
7	IPL/AES Petersburg	Pike	0.2	3	0.4	-60.1
8	American Electric Power -Tanners Creek Plant	Dearborn	0.2	7	0.2	-16.4
9	IPL/AES Harding Street Station	Marion	0.2	14	0.1	108.2
10	Frank E. Ratts Generating Station	Pike	0.1	9	0.1	0.5

What are the Top Ten facilities reporting REDUCTIONS of known or potential carcinogenic* chemical releases for RY2001 (All Sectors)?

*as defined by OSHA

Facility	County	2001 Releases (million pounds)	2000 Releases (million pounds)	% Change
Carpenter Co., Elkhart Div.	Elkhart	0.6	1.1	-42.4%
Flexible Foam Products	Elkhart	0.3	0.7	-57.3%
Maax Midwest (Bremen Glas, Inc.)	Marshall	0	0.3	-100.0%
IPL/AES – Petersburg	Pike	0.2	0.4	-60.0%
Foamex L.P.	Elkhart	0.5	0.7	-33.6%
Visteon Systems, LLC.	Fayette	0	0.2	-100.0%
Perry Chemical & Mfg. Co. Inc.	Tippecanoe	<0.0	0.1	-97.4%
FOAMEX L.P.	Elkhart	0	0.1	-100.0%
Rinker Boat Company, Inc.	Kosciusko	0.2	0.3	-28.3%
Gold Shield of Indiana, Inc. #43-2	Adams	0.2	0.2	-37.2%

What are the Top Ten counties for the release of known or potential carcinogenic* chemicals in RY2001?

*as defined by OSHA

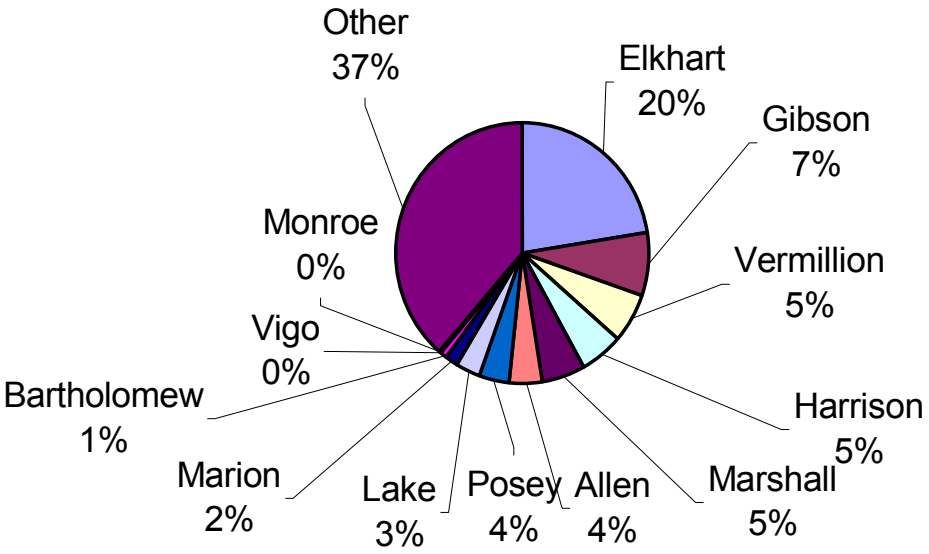
The top seven counties make up 50% of the carcinogenic chemical releases in Indiana.

2001 Rank	County	2001 Releases (million pounds)	# Facilities	2000 Rank	2000 Releases (million pounds)	# Facilities
1	Elkhart	3.3	57	1	4.5	53
2	Gibson	1.1	5	2	1.2	4
3	Vermillion	0.9	2	4	0.7	2
4	Harrison	0.8	1	6	0.6	1
5	Marshall	0.8	16	3	1.1	15
6	Allen	0.6	43	9	0.5	30
7	Posey	0.6	4			
8	Sullivan	0.5	2	10	0.5	1
9	Kosciusko	0.5	16	8	0.6	14
10	Lake	0.4	39			

Note: Reductions in carcinogenic releases occurred in the following counties:
Elkhart: down 1.2 million pounds.
Gibson: down 30,000 pounds.
Marshall: down 317,000 pounds
Sullivan: down 17,000 pounds
Kosciusko: down 66,000 pounds
Adams County ranked #5 in 2000. Its carcinogenic releases dropped by 183,000 pounds.
Pike County ranked #7 in 2000. Its carcinogenic releases dropped by 253,000 pounds.

Known or Potential Carcinogenic Releases by County

2001



REGIONAL AREAS of CONCERN RELEASE INFORMATION

Southwest Region (Posey, Vanderburgh, and Warrick Counties)

- Slightly over 10% (1.2 million pounds) of reported releases in the Southwest Region are known or potential carcinogens.
- Releases of known or potential carcinogens remained almost unchanged. (1.2 million pounds in 2000; 1.2 million pounds in 2001)

What are the total releases by county for the SW Region (All Reporters, All Chemicals)?

County	# Facilities	2001 Releases (million pounds)
Posey	6	3.1
Vanderburgh	24	1.4
Warrick	6	7.3
TOTAL	**36**	**11.9**

Northern Region (Elkhart, Kosciusko, Marshall, and St. Joseph Counties)

- Slightly over 68% (4.9 million pounds) of reported releases in the Northern Region are known or potential carcinogens.
- Releases of known or potential carcinogens decreased 27% or 1.8 million pounds. (6.7 million pounds in 2000; 4.9 pounds in 2001)

What are total releases by county for the Northern Region (All Reporters, All Chemicals)?

County	# Facilities	2001 Releases (million pounds)
Elkhart	112	4.4
Kosciusko	27	1.2
Marshall	29	1.1
St. Joseph	38	0.5
Total	**206**	**7.1**

Northwest Region (Lake, LaPorte and Porter Counties)

- Almost 4% (770,000 pounds) of reported releases in the Northwest Region are known or potential carcinogens.
- Releases of known or potential carcinogens remained almost unchanged. (765,000 pounds in 2000; 770,000 pounds in 2001)

What are total releases by county for the NW Region (All Reporters, All Chemicals)?

County	# Facilities	2001 Releases (million pounds)
Lake	53	16.2
LaPorte	30	1.4
Porter	20	3.0
Total	**103**	**20.5**

Central Region (Hamilton, Hendricks, Hancock, Marion, Boone, Shelby, Morgan, and Johnson Counties)

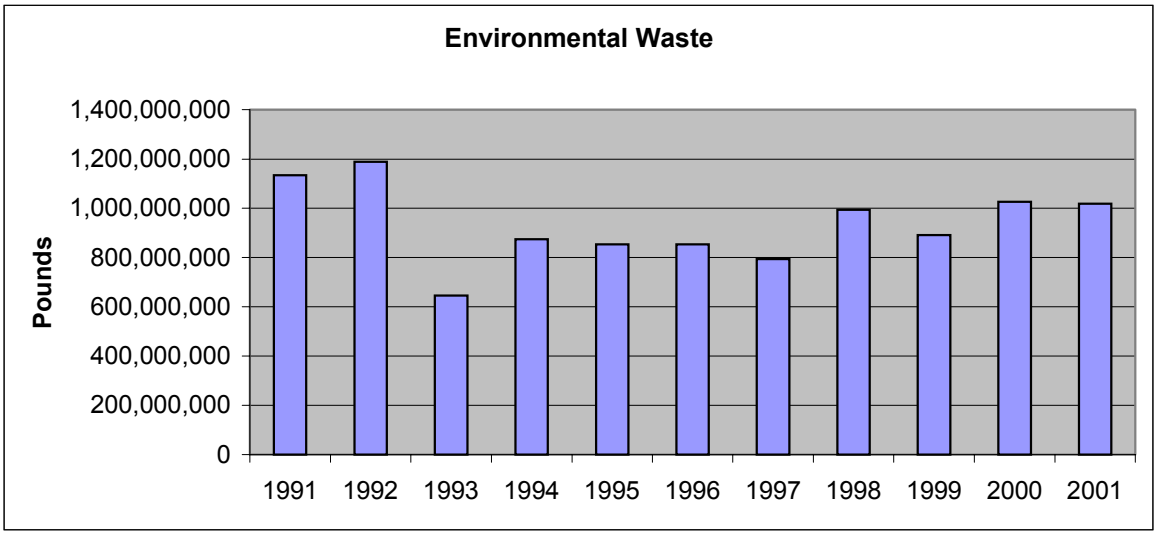
- Almost 9% (480,000 pounds) of reported releases in the Central Region are known or potential carcinogens.
- Releases of known or potential carcinogens decreased almost 10% or 52,000 pounds. (531,000 pounds in 2000; 480,000 pounds in 2001)

What are the total releases by county for the Central Region (All Reporters, All Chemicals)?

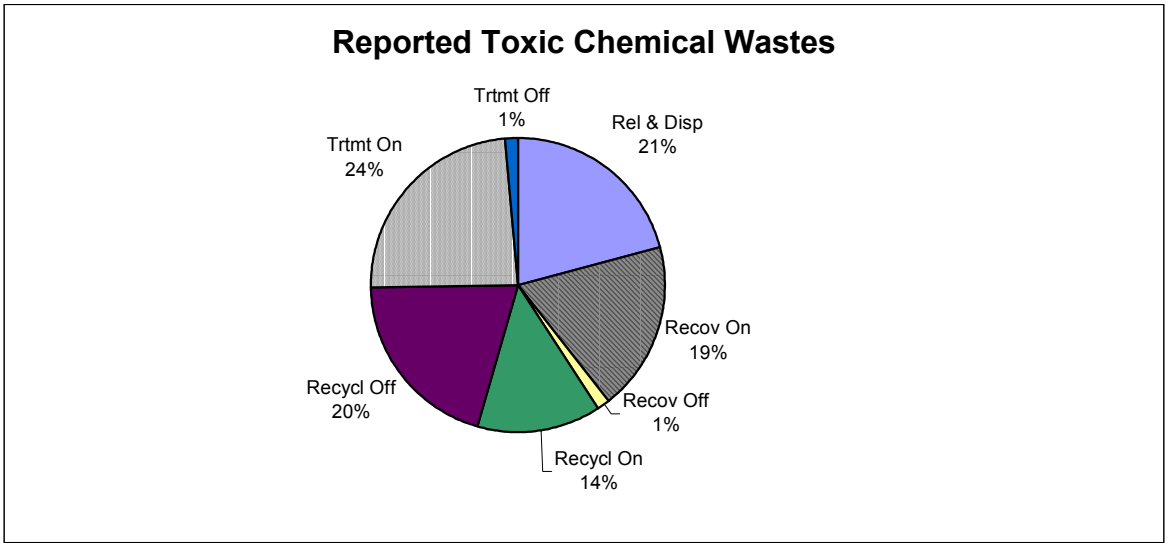
County	# Facilities	2001 Releases (million pounds)
Boone	4	>0.0
Hamilton	8	0.2
Hancock	6	0.2
Hendricks	1	>0.0
Johnson	9	0.6
Marion	101	3.0
Morgan	2	0.5
Shelby	16	0.8
Total	**128**	**5.4**

WASTE INFORMATION

Environmental waste decreased by 7.8 million pounds or less than 1% from 2000 (1.026 billion pounds) to 2001 (1.018 billion pounds). Waste management activities reported to TRI include recycling, burning for energy recovery, and destruction of the toxic chemical through treatment and disposal in landfills.



What is the breakdown of relative amounts of reported wastes managed in RY2001?



Releases and Disposal: Releases of the toxic chemical including any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing [on-site or off-site] to the environment (including the abandonment of barrels, container, and other closed receptacles). Does not include toxic chemicals treated on-site or off-site.

Energy Recovery On-site: The total amount of a residual material containing a TRI toxic chemical that is combustible and has a heating value high enough to sustain combustion when used in combustion units integrated into an energy recovery system (i.e., industrial furnaces, industrial kilns, and boilers) on-site.

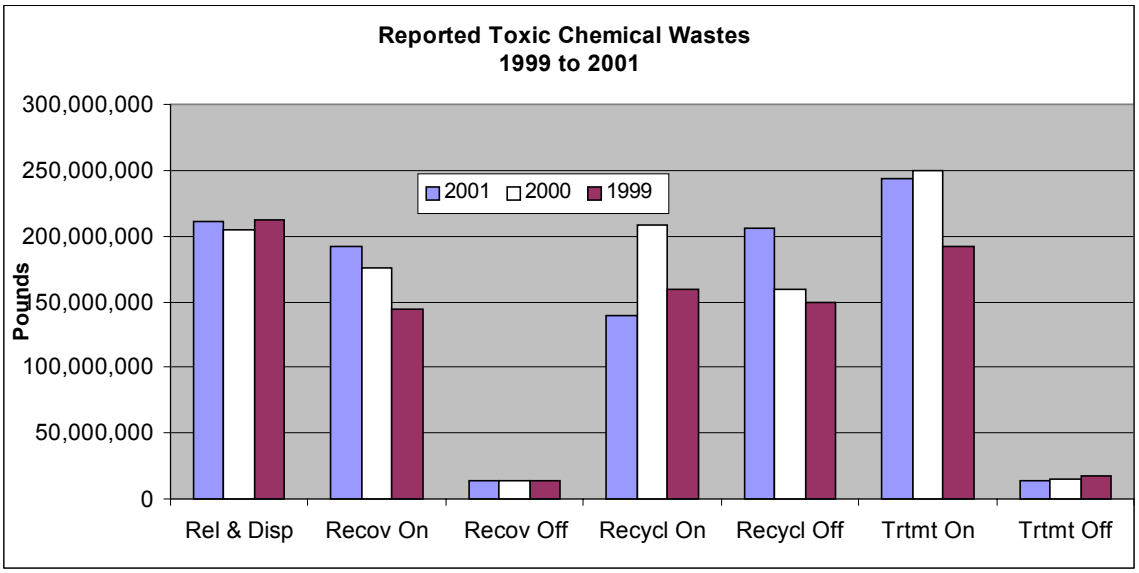
Energy Recovery Off-site: The total amount of a residual material containing a TRI toxic chemical that is combustible and has a heating value high enough to sustain combustion when used in combustion units integrated into an energy recovery system (i.e., industrial furnaces, industrial kilns, and boilers)off-site. Does not include catastrophic events such as tornados, floods or fires.

Recycling On-site: The toxic chemical or mixture containing the toxic chemical is recycled on-site.

Recycling Off-site: The toxic chemical or mixture containing the toxic chemical is recycled off-site.

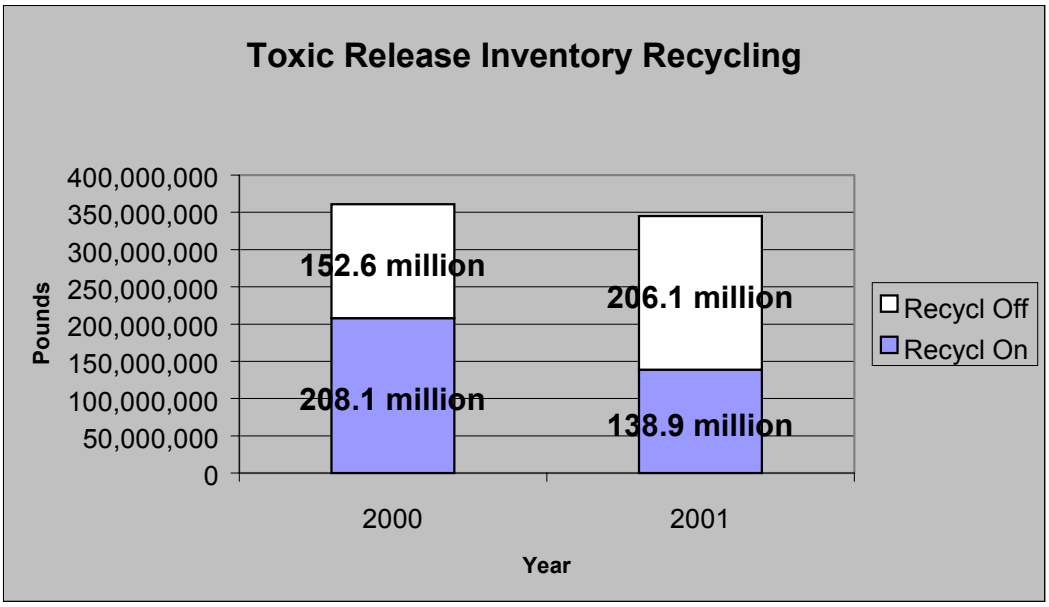
Treatment On-site: The toxic chemical or mixture containing the toxic chemical undergoes on-site waste treatment. The chemical is destroyed in the process.

Treatment Off-site: The toxic chemical or mixture containing the toxic chemical is sent to a POTW (Publically Owned Treatment Works) or other off-site location for waste treatment. The chemical is destroyed in the process.



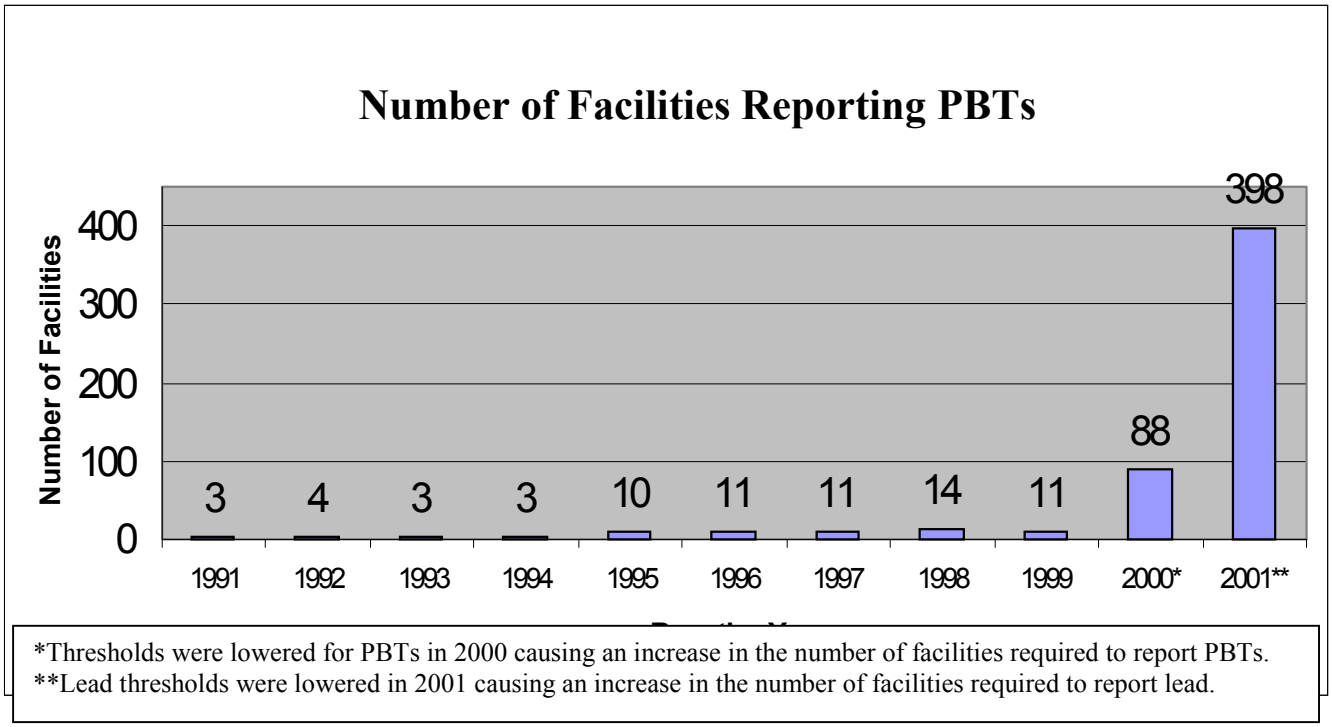
How did recycling reported to TRI in RY2001 compare to RY2000?

From 2000 to 2001, recycling off-site increased 35% (53.5 million pounds). Recycling on-site decreased 38% (78.1 million pounds). 34% (345 million pounds) of environmental waste was recycled in 2001.



*IDEM data is inconsistent with EPA data with regard to recycling. This is due to a revision that was submitted after EPA locked their data down but prior to when IDEM had locked their data.

PERSISTENT BIOACCULATIVE TOXIC (PBT) CHEMICALS



*Thresholds were lowered for PBTs in 2000 causing an increase in the number of facilities required to report PBTs.
**Lead thresholds were lowered in 2001 causing an increase in the number of facilities required to report lead.

What are the Top Ten PBT chemicals released in Indiana for RY2001 (All Reporters)?

Chemical Name	Air[1]	Stream[2]	Land[3]	UI[4]	Releases[5] (lbs)
Lead Compounds	44,370	5,297	952,384	1,439	1,002,052
Lead	11,165	861	28,183	0	40,210
Polycyclic Aromatic Compounds	32,150	68	860	0	33,078
Mercury Compounds	6,577	124	2,543	0.40	9,246
Polychlorinated Biphenyls (PCBs)	11	0	2,042	0	2,053
Mercury	650	1	456	0	1,109
Benzo(G,H,I)Perylene	877	21	0.00	0	898
Tetrabromobishpenol A	315	8	0.00	0	323
Dioxin and Dioxin-like Compounds	0.41	0.00	0.27	0.00	0.68
Hexachlorobenzene	165	0	0	0	165
Methoxychlor	2	0	0	0	2

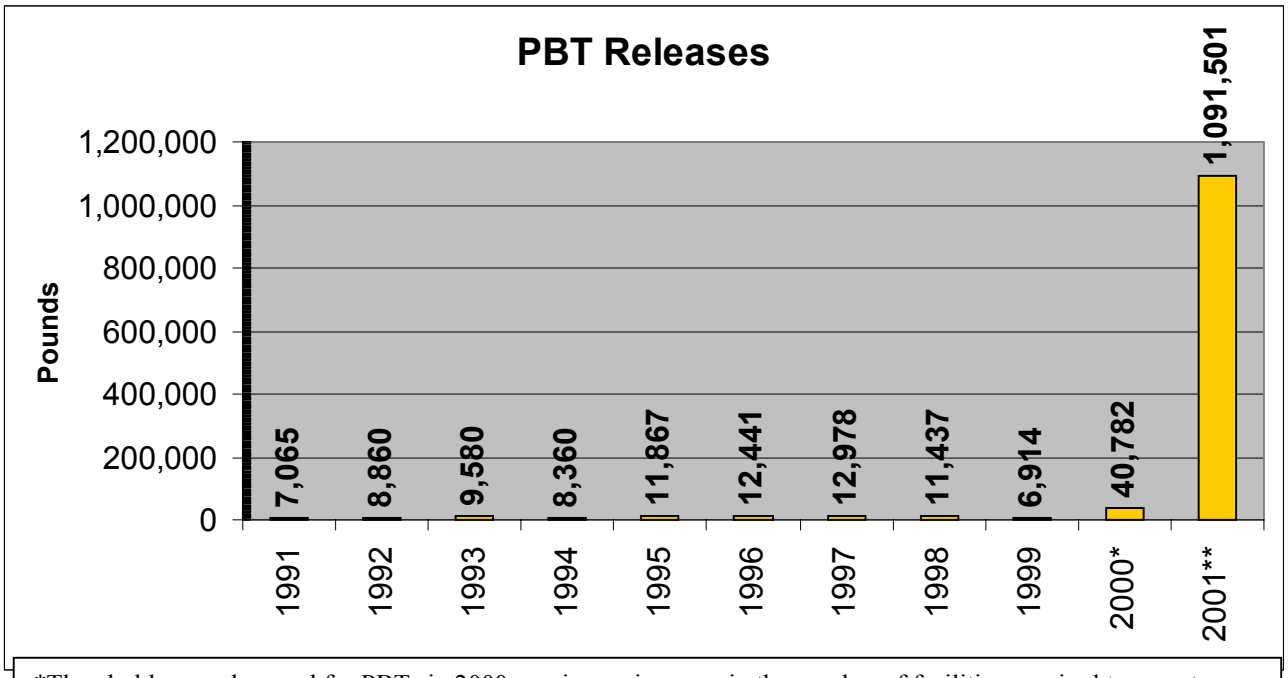
[1]**Air:** Total annual amount of all releases to the air of the TRI reportable toxic chemicals exceeding the reporting threshold.
[2]**Stream:** Total annual amount of all releases to each receiving stream or water body of the TRI reportable toxic chemicals exceeding the reporting threshold.
[3]**Land:** Total annual amount of the TRI reportable toxic chemicals exceeding the reporting threshold that are landfilled on-site, used for land treatment or application farming, held in surface impoundment, or released to the land in spills or leaks.
[4]**Underground Injection (UI):** Total annual amount of the TRI reportable toxic chemicals exceeding the reporting threshold that are injected into all wells including Class 1 wells at the facility.
[5]**Releases:** Sum of air, stream, land, and UI annual releases of the toxic chemical.

What facilities are the Top Ten PBT release reporters?

2001 Rank	Facility Name	County	Air	UI	Land	Stream	Releases (lbs)
1	Gibson Generating Station	Gibson	2,480.76	0.00	230,616.10	0.00	233,096.86
2	USS Gary Works	Lake	3,065.30	0.00	150,035.00	3,264.00	156,364.30
3	Merom Generating Station	Sullivan	830.47	0.00	120,460.00	0.80	121,291.27
4	Cayuga Generating Station	Vermillion	1,522.99	0.00	67,100.00	0.00	68,622.99
5	ESSROC Cement Corp.	Cass	412.59	0.00	54,624.00	0.00	55,036.59
6	ALCOA Power Generating, Inc.	Warrick	1,964.58	0.00	52,893.00	25.07	54,882.65
7	Bethlehem Steel Corp. - Burns Harbor Div.	Porter	7,324.80	1,300.40	37,308.30	0.00	44,633.10
8	American Electric Power- Rockport Plant	Spencer	1,708.70	0.00	28,794.00	251.00	30,753.70
9	American Electric Power- Tanners Creek Plant	Dearborn	532.60	0.00	27,130.00	38.00	27,700.60
10	Frank E. Ratts Generating Station	Pike	657.76	0.00	27,002.00	0.00	27,659.76

What is the likely reason for the increase in PBT releases?

The increase in reporting facilities in RY2000 is a result of new reporting thresholds and chemicals. EPA lowered the TRI reporting threshold for certain persistent bioaccumulative toxic (PBT) chemicals and added certain other PBT chemicals to the TRI list of toxic chemicals. For RY2001, the thresholds for lead and lead compounds were reduced to 100 pounds from 10,000/25,000 pounds threshold.



*Thresholds were lowered for PBTs in 2000 causing an increase in the number of facilities required to report PBTs.

**Lead thresholds were lowered in 2001 causing an increase in the number of facilities required to report lead.

LEAD and LEAD COMPOUNDS

As a PBT, lead and lead compounds are subject to a new, lower reporting threshold beginning in RY2001. Lead is considered to be of particular concern because of its known health effects on sensitive populations. Previously, facilities were not required to report releases or waste management activities for lead or lead compounds, unless they manufactured or processed more than 25,000 pounds or otherwise used 10,000 pounds annually. The new requirements lower the annual reporting threshold for lead and lead compounds to 100 pounds. For lead found in stainless steel, brass, or bronze alloys, the threshold remains at 25,000 pounds each for manufacturing and processing and 10,000 pounds for otherwise use.

Lead and lead compounds are listed separately on the EPCRA section 313 list of toxic chemicals. If the reporting threshold is exceeded for both lead and lead compounds, only a single report for lead compounds must be filed.

What are the Top Ten facilities for the release of lead and/or lead compounds for RY2001?

2001 Rank	Facility Name	Air	Stream	Land	UI	Releases (lbs)	County
1	Gibson Generating Station	1871	0	230235	0	232107	Gibson
2	USS Gary Works	2190	3086	150000	0	155276	Lake
3	Merom Generating Station	612	0.8	120000	0	120612	Sullivan
4	Cayuga Generating Station	1280	0	67000	0	68280	Vermillion
5	ESSROC Cement Corp.	332	0	54340	0	54672	Cass
6	ALCOA Power Generating, Inc.	1698	25	52822	0	54545	Warrick
7	Bethlehem Steel Corp. -Burns Harbor Division	7300	0	37300	1300	44600	Porter
8	American Electric Power –Rockport Plant	400	251	28700	0	29351	Spencer
9	Frank E. Ratts Generating Station	571	0	27000	0	27571	Pike
10	American Electric Power -Tanners Creek Plant	210	38	27000	0	27248	Dearborn

What quantity of lead and lead compounds was released in RY2001?

	Air	UI	Land	Stream	Releases (lbs)
Lead	11,165	0	28,183	861	40,210
Lead Compounds	44,370	1,439	9,523,848	5,297	1,002,052

MERCURY COMPOUNDS

What are the Top 20 facilities reporting Mercury Compound releases for RY2001?

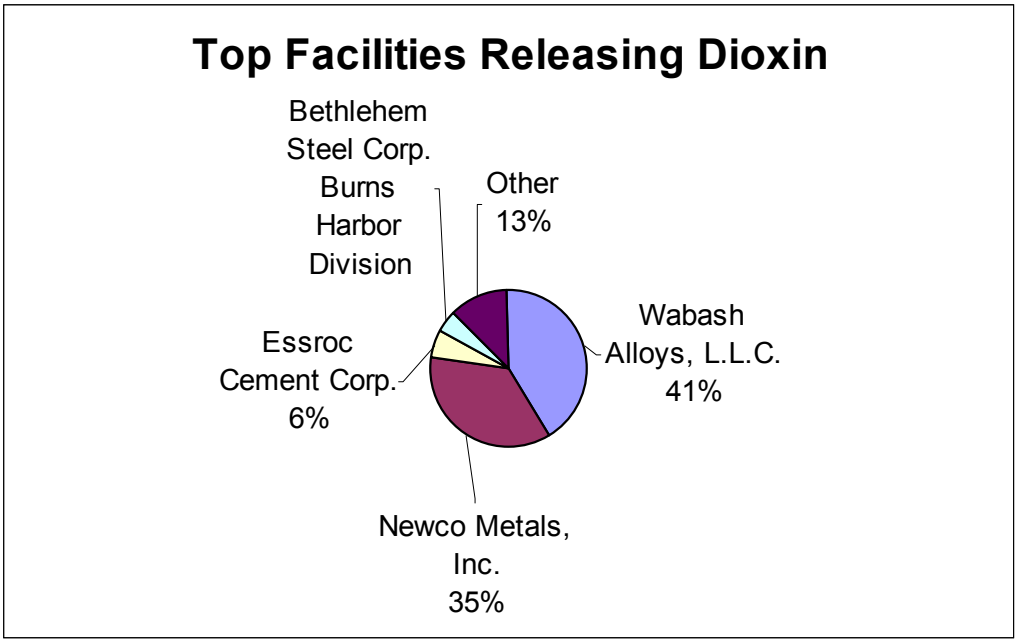
	Facility	County	Releases (lbs)
1	American Electric Power – Rockport Plant	Spencer	1394
2	Gibson Generating Station	Gibson	980
3	IPL/AES Petersburg	Pike	719
4	Indiana Harbor Coke Co. A.P.	Lake	719
5	Merom Generating Station	Sullivan	677
6	NIPSCO R.M. Schahfer Generating Station	Jasper	665
7	American Electric Power -Tanners Creek Plant	Dearborn	450
8	ESSROC Cement Corp.	Cass	344
9	Cayuga Generating Station	Vermillion	340
10	ALCOA Power Generating, Inc.	Warrick	335
11	Pride Mine, #S-321	Knox	321
12	SIGECO A. B. Brown Generating Station	Posey	218
13	IPL/AES Harding Street Station	Marion	208
14	Wabash River Generating Station	Vigo	178
15	Michigan City Generating Station	LaPorte	162
16	ESSROC Cement Corp.	Clark	157
17	Gallagher Generating Station	Floyd	154
18	USS Gary Works	Lake	149
19	D.H. Mitchell Generating Station	Lake	147
20	SIGECO F. B. Culley Generating Station	Warrick	97

DIOXIN and DIOXIN-like COMPOUNDS

In Indiana, approximately 60.14% of dioxin releases occurred to the air and about 39.86% were to land. There were 49 facilities reporting dioxin releases; however, four (see table below) were responsible for 87% of the total release.

Facility	County
Wabash Alloys, L.L.C.	Wabash
Newco Metals, Inc.	Lawrence
ESSROC Cement Corp.	Cass
Bethlehem Steel Corp. - Burns Harbor Div.	Porter

These facilities are made up of iron and steel manufacturing and a cement kiln. Raw material feedstock for steel making and combustion fuels for cement making are the main sources of dioxin production from these industries. Dioxin-like substances are frequently present in the form of mixtures. Exposure to these compounds may have various adverse health effects, depending on dose. The effect of the various substances is rather diverse, but it is certain that many dioxin-like substances act in a similar way on body cells. For additional information on dioxins and its health affects, please refer to www.atsdr.cdc.gov/tfacts104.html.



How much dioxin was released in RY2001 and from which media?

Dioxin and dioxin-like compounds are reported in grams. 453.59 grams are equal to one pound. In 2001, 0.68 pounds of dioxin or dioxin-like compounds were released in Indiana.

Year	Air (grams)*	UI (grams)*	Land (grams*)	Stream (grams)*	Releases (grams)*
2001	185.4807	0	122.942	0.01654	308.43925
2000	191.5794	19.6001	0	0.0263	211.2058

*Note 453.59 grams equal 1 pound.

What is the breakdown of relative amounts of reported dioxin wastes that were managed in RY2001?

(Dioxin is reported in grams)

Year	Rel & Disp (grams*)	Recov On	Recov Off (grams*)	Recycl On (grams*)	Recycl Off (grams*)	Trtmt On (grams*)	Trtmt Off (grams*)	Envtl Waste (grams*)
2001	540.8691	0.0000	0.0000	0.0000	0.0000	1232.735	0.60567	1774.21
2000	458.1764	0.0000	0.0000	0.0000	0.0000	869.8044	0.0053	1,327.9861

*Note: 453.59 grams equal 1 pound. As a result the total environmental waste for Indiana is 3.9 pounds. For definitions of terms, see page 26.